

WHAT IS CLAIMED IS:

1. A motorized seat belt retractor comprising:
 - a motor having a motor shaft;
 - a load limiter for controlling the tensile load on a webbing withdrawn in the event of emergency; wherein the load limiter is configured to utilize a force generated by the rotation of the motor shaft to thereby control the tensile load on the webbing.
 - wherein the load limit is controlled using a fuse located in series with the motor in an electrical circuit configured to carry a driving current to the motor.
2. The motorized seat belt retractor of claim 1, wherein the fuse is configured to open at a predetermined value of current flow through the circuit to thereby open-circuit the motor and control the load limiter.
3. The motorized seat belt retractor of claim 1, wherein said load limiter is configured to control the tensile load on the webbing by alternatively placing the motor in a short-circuit and non-short-circuit condition according to a predetermined sequence.
4. The motorized seat belt retractor of claim 3, further comprising an electrical controller configured to establish the predetermined sequence.
5. The motorized seat belt retractor of claim 4, wherein the fuse is configured to open at a predetermined value of current flow through the circuit to thereby open-circuit the motor and control the load limiter.
6. The motorized seat belt retractor of claim 1, wherein said load limiter includes a mechanism for transferring the force generated by the rotation of the motor shaft to the webbing.

7. The motorized seat belt retractor of claim 6, wherein said mechanism comprises a gear train which couples the shaft of the motor to a spool on which the webbing is wound.
8. The motorized seat belt retractor of claim 7, wherein said mechanism includes a locking mechanism to prevent the motor shaft from rotating in a direction corresponding to the webbing being withdrawn.
9. The motorized seat belt retractor of claim 1, wherein the load limiter is configured to increase the force generated by the motor at a rate determined based on the weight of a vehicle occupant.
10. The motorized seat belt retractor of claim 9, wherein the control device is an electrical controller.
11. The retractor of claim 10, wherein the load limiter only utilizes the force generated by the motor.